Implementation Issues Related to MPCA's Proposed Changes to its Criteria for Wild Rice
11/3/17

NPDES Implementation Issues for Consideration:

1. **Proposed changes to Minn. R. 7053.0406:**

   EPA would like to discuss two proposed changes to Minn. Rules in Chapter 7053, which may be considered revisions to Minnesota's National Pollutant Discharge Elimination System (NPDES) program, subject to EPA approval, under 40 C.F.R. § 123.62.

   - MPCA proposes a modification to Minn. R. 7053.0406 (NPDES permitting) that includes language stating that the commissioner must not establish water quality-based effluent limits (WQBELs) if the location of the discharge and site-specific hydraulic or substrate conditions dictate that the discharge will not affect the wild rice water. Chapter 6.H of the Statement of Need and Reasonableness (SONAR) dated July 2017 explains that this provision is meant to be applied in sections of wild rice waters where wild rice cannot grow. We would like to discuss in more detail how this determination would be made and whether a revision to Minnesota's water quality standards in the form of a site-specific criterion would need to be adopted and approved by EPA under section 303(c) of the CWA before this provision in Minn. R. 7053 could be implemented in a NPDES permit.

   - There is a proposed change to the MPCA's permitting rules at Minn. R. 7053.0406 subpart 2 that provides: "A permit applicant may apply for a variance from the sulfate standard for wild rice and associated water-quality-based effluent limit (WQBEL)". We would like to discuss this proposed revision. Minnesota water quality standards already include an approved procedure to grant a variance from a water quality standard and we would like to discuss whether the proposed revision is designed to be implemented independently of MPCA's existing variance procedures. If a variance to a water quality standard is granted and approved by EPA, then the WQBEL would be calculated based on the variance-based standard. There is no process to provide a variance from a WQBEL.

2. **Flow Regime:**

   The MPCA is proposing the 365Q10 flow (proposed rule language Minn. R. sections 7053.0205 Subpart 7, 7050.0130 Subpart 2a, 7050.0224 Subpart 5.D) for setting WQBELs and for determining when the WQBELs are in effect.

   - The proposed rule states at Minn. R. 7050.0224 Subp. 5. D. that "Discharges of sulfate in sewage, industrial waste, or other wastes affecting class 4D waters must be controlled so that the numeric sulfate standard for wild rice is maintained at stream flows that are equal to or greater than 365Q10." EPA is concerned that this appears to state that the WQBEL would not apply during times when the flow is

lower than the 365Q10. We would like to discuss with you how this choice of flow regime will affect effluent limits analysis and limit-setting.

- The proposed rule language does not include how the flow regime would apply to lakes. Most of the wild rice waters are lakes. The SONAR states that "A one-in-ten year flow recurrence interval or equivalent value calculated using site-specific water modeling would apply to lakes, wetlands, and reservoirs" (at p. 99). We would like to further discuss how MPCA plans to apply the criteria to lakes, as implementation of the criterion appears to be particularly time and resource intensive.

3. **Effluent Limit Reviews and Limits Calculation. (SONAR Chapter 6.G, H, SONAR Attachment 4, dated July 2017):**

EPA would like to engage MPCA in a discussion of the data requirements and procedures for setting WQBELs as we have some concerns regarding language that is currently in the SONAR regarding this topic.

- The SONAR states that sediment data to calculate the sulfate standard, surface water sulfate data, and effluent sulfate data are needed in order to evaluate the need for effluent limits. The SONAR further states that "sufficient" data must be collected, but doesn't describe how MPCA would determine if or when the data that has been collected is "sufficient". We would like to discuss with MPCA what it would consider to be sufficient data.

- In the SONAR and appendices, the MPCA describes how effluent limits will be evaluated and calculated. We would like to discuss the following questions with you regarding these procedures:

  - **Role of Point Sources:** The SONAR and Appendix 4 use only the terms "wastewater treatment plant" or "wastewater treatment facility" but not "point source." We would like to understand how MPCA may view the difference between the applicability of this procedure to wastewater treatment plants and facilities in contrast to other point sources.

  - **Direct Discharges, Sole Dischargers:** The description of how MPCA will determine which facilities are being evaluated for the need for limits focuses exclusively on discharges upstream from wild rice waters and does not address discharges directly to wild rice waters. Additionally, the procedures focus on those situations where there are multiple sources some distance upstream of wild rice waters. We would like to discuss how the procedures might be adapted to situations where there are direct dischargers or only a sole discharger contributing sulfate to a wild rice water.

- **When to Conduct Effluent Limits Reviews:** The implementation procedures appear to provide that MPCA may decide not to conduct an effluent limits review for some facilities as a result of their distance from a wild rice water, or their relative contribution of sulfate to a wild rice water, even if the wild rice water is exceeding criteria and the facility has a reasonable potential to discharge sulfate. We would like to discuss this in more detail.

- **Role of Background Concentrations:** The implementation procedures include methods for determining background concentrations of sulfate that appear to be designed for situations where there is significant nonpoint source pollution and for far-field applications. EPA recommends that MPCA instead use actual data where it is available as suggested in EPA's NPDES Permit Writer's Manual, Chapter 6 (EPA-833-K-10-001).

- **Role of Workload:** The implementation procedures link effluent limit reviews to staff levels and workload, which is not a CWA-based rationale for not including a limit in a permit. We would like to better understand how MPCA plans to undertake the effluent limits review process in light of current and future staffing and work load.

- MPCA is proposing to express limits as a 12-month moving total mass and proposes that concentration-based limits may be used if warranted. However, there appear to be few details of how this would be determined or calculated. As such, we would like to discuss MPCA's choice of flow regime in calculating mass limits. EPA recommends that MPCA instead use actual flow data to calculate mass limits, because quite often the wet weather and maximum design flow rates are significantly higher than actual discharge flow rates. This is particularly important for discharges to waters that are already exceeding criteria and for dischargers that are highly influenced by wet weather. In addition, we'd like to discuss in further detail those situations where MPCA would determine that concentration-based limits are appropriate.

- MPCA has proposed an implementation guidance that differs from EPA's guidance for determining if a facility has reasonable potential to exceed the sulfate water quality criteria (WQC) and to calculate effluent limits. While the initial intent of EPA's Guidance, the "Technical Support Document for Water Quality-based Toxics Control (TSD, EPA/505/2-90-001) was to deal with aquatic life and human health effects, there is nothing in the TSD methods that would prevent them from being used for calculation of limits necessary to for all WQC, including Minnesota's proposed wild rice criteria. Specifically, the EPA TSD methods are based on effluent variability and the duration of the criteria; the mode of action or effect of the pollutant does not come into play. Therefore, MPCA could use the TSD to determine reasonable potential and calculate limits, ensuring compliance with federal regulations at 40 C.F.R. §§ 122.44(d) and 122.4(d). We would like to discuss this issue with you further.

- In addition, per 40 C.F.R. § 122.45(d), average monthly as well as maximum daily (non-POTW) and weekly average (POTW) limits are necessary unless impractical to calculate. We would like to discuss how this requirement would apply in the case of this criterion.

- MPCA includes in the discussion of how limits would be calculated a step where all facilities in a watershed are summed together and treated as a group, limits are calculated and, it appears, reported as a sum of multiple facilities. It is not clear why this calculation is being done in this way or how it would be implemented with respect to setting limits in an individual draft permit, as it is unlikely that each permit in the watershed would be up for reissuance at the same time. We would like to discuss this calculation before finalizing our comments.

4. **Protection of designated/beneficial uses:** Consistent with 40 C.F.R. § 122.4(d), permits may not be issued unless the imposition of conditions meet the applicable water quality requirements of all affected states, including but not limited to the wild rice use. EPA would like to discuss MPCA's strategy for protecting designated uses (i.e., in NPDES permits) during the time period between the effective date of the criterion and while necessary data are collected to implement the wild rice WQC.

5. **Approach to collection of data necessary to implement the WQC:** The effluent limit review section of the SONAR implies that the MPCA will undertake sediment sampling when permits are up for review and that, at that time, ambient surface water sulfate concentrations will be examined to determine whether sulfate in the wild rice water is meeting or exceeding the standard or if additional data are needed. We would like to discuss MPCA's plans to prioritize sediment sampling according to permit reissuance schedules as well as whether MPCA would accept data from third-parties to fill the data-collection need identified in the SONAR. We would like to suggest some options for prioritizing data collection in wild rice waterbodies, specifically prioritizing wild rice waters that have direct or near-field (<5 miles) dischargers of sulfate and those where dischargers are operating under expired or soon-to-be expired NPDES permits. As referenced below these discussions would also be relevant with respect to the assessment and 303(d) listing process.

303(d) Assessment and Listing Issues for Consideration:

1. EPA would like to continue to coordinate with MPCA staff as it develops its strategy for incorporating sediment and sulfate water column sampling into its existing Intensive Watershed Monitoring Approach (IWMA) and its 303(d) Assessment Methodology to determine whether wild rice waters are in attainment with the revised WQC.

2. We note that, on page 82 of the SONAR, MPCA explained that a waterbody may exceed the numeric sulfate standard calculated for that waterbody once in 10 years without that waterbody being considered as impaired. EPA would like to discuss with MPCA the

criteria it would use to establish an impairment determination and how data collected as part of MPCA's IWMA would be considered for assessment decision making.

3. EPA would like to understand MPCA's approach for incorporating sediment sampling (for dissolved iron and total organic carbon) and sulfate sampling into its existing IWMA and to understand how field sampling completed as part of the IWMA will provide a sufficient sulfate water quality data set which will be appropriate for 303(d) assessments.